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ABSTRACT

This paper discusses the emergence of a management process known as Business Process Redesign (BPR) in higher education, which is promoted as a successor to the Total Quality Management (TQM) approach that has influenced higher education management in recent years. The paper chronicles recent management changes in higher education and the emergence of the BPR model. It also reviews the process's major elements, including its underlying philosophy, theory, and its three-pronged conceptual framework of Discover, Redesign, and Realize. This framework forms the basis for selecting the appropriate change tactics and the formation of a change team to assess current conditions and generate specific redesign ideas based on the development of data which detects existing defects. The paper then reviews two case studies involving procurement practices and physical plant operation. It concludes by making suggestions for the possible implementation of BPR principles by facilities managers. (Contains 12 references.) (MDM)

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A Strategic Business Improvement Model for Higher Education: Move Over TQM - Here Comes BPR

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A Strategic Business Improvement Model for Higher Education
Move Over TQM - Here Comes BPR

Introduction

This paper discusses the emergence of a management process called Business Process Redesign, or BPR, in higher education. This next generation of theory and practice is promoted as the successor to Total Quality Management (TQM), the most recent system of choice for management gurus throughout the United States. BPR proponents claim that it is more powerful because it challenges the status quo, while TQM usually accepts this condition. The publication Business Process Redesign for Higher Education,[1] sponsored by the National Association of College and University Business Officers (NACUBO), is used as a basis for this review of BPR, and conclusions regarding its applicability to facilities managers in the academy are presented.

This paper is divided into four sections. The first section chronicles recent management changes in higher education and the emergence of the BPR model. Section two reviews the process's major elements, including its underlying philosophy and theory, its three-pronged conceptual framework of Discover, Redesign and Realize which forms the basis for selecting the appropriate change tactics, and the formation of a "change team" to assess current conditions and generate specific redesign ideas based on the development of data which detects existing defects. The third section reviews two of the case studies, involving procurement practices and physical plant operation, which were presented in Business Process Redesign. In the final section, conclusions are reached and suggestions proposed for possible implementation of BPR principles by facilities managers.

Business Management Change and the Emergence of BPR In Higher Education

Corporate America has experienced significant changes in the past decade, as companies attempted to reduce expenses and reposition themselves in the volatile environment of modern business practices. Not surprisingly, higher education has been invaded by business-developed programs and strategies which are aimed at promoting similar changes in the academy. As a result, it seems that the three "Rs" of higher education have changed; they now appear to be Reengineering, Restructuring and Rightsizing. Every area of post-secondary education is being encouraged to change, and articles describing these efforts have appeared in The Chronicle of Higher Education, Today's Facility Manager, and Facilities Manager, to name but a few examples in the facilities sector. The article by Dr. Harvey Kaiser, "Rightsizing Through Restructuring: A Higher Education Challenge"[2] is an excellent overview of the dilemma facing higher education from the perspective of one who is arguably the premier spokesman for members of the facilities management profession. In addition, the new monograph Rightsizing Effectively[3] by APPA: The Association of Higher Education Facilities Officers (APPA) focuses even more on facilities organizations in the academy.

Since the 1980s, the Total Quality Management model has been promoted in the United States business sector, and by the early 1990s TQM was proposed for the academy. In 1991, the New Directions for Institutional Research Series presented Total Quality Management for Higher Education[4]. Since then, APPA has published several excellent articles, including "Learning from Success & Failure in Quality Management[5]" and "TQM Training and Implementation Plan[6]," and a well written monograph Building Quality: TQM

for Campus Facilities Managers[7]. TQM information is available on the Internet at almost a dozen locations[8], including the TQM-L discussion list, which is devoted to Quality Management in Higher Education. In the construction industry, a business that is closely aligned with facilities management, TQM has been accepted, albeit reluctantly, during the past few years, according to Engineering News Record.[9] Bertram Smith's recent article "Benchmarking: Old Technique, New Frontier[10]" discusses TQM and its relationship with BPR. Clearly, BPR has evolved from management's quest for quality in the 1990s, and is intended to be a more powerful and robust methodology than TQM.

Recently, the National Association of College and University Business Officers published Business Process Redesign for Higher Education. NACUBO has been a leader in the movement toward managing costs in the face of pressures from today's cutback management trend, and joined with the Coopers & Lybrand consulting firm to publish the recent benchmarking study Operational Benchmarking for Quality Improvement and Cost Management in Higher Education[11]. Coopers & Lybrand published its own business process redesign book for the general business sector in 1992, and then adapted their methodology for higher education when they were commissioned by NACUBO to help write Business Process Redesign. In that publication, the authors explain that this process was designed to help higher educations institutions identify and improve their business management methods, and is defined as a "... managerial approach that holistically incorporates institutional strategy, work processes, people and technology to improve performance radically and to create sustainable competitive advantage by challenging and redesigning the core business processes of an institution using operational, technical and change management in a unified

way." (P.6). While acknowledging that the customers, culture and core business of the academy are different from those in the business sector, the process designers suggest that its methodology is effective, based on several case studies reviewed in Business Process Redesign. The process is intended for review and use by senior management personnel in higher education engaged in the task of revamping obsolete management functions, and is described as a "toolkit" for "...addressing the extraordinary confluence of today's external issues". (P.1).

Conceptual Framework of BPR

The underlying philosophy and theory behind the proposed process is a direct spin-off from management models used in corporate America in recent years. BPR develops from theory to practice as a three-phase conceptual paradigm - Discover, Redesign, Realize - from which institutional analysts can develop their own unique approach to change. The subsequent work steps result in an "overarching blueprint for implementing change" (P.1), weaving together technological solutions, process improvement techniques and change management strategies. This blue print provides the change team with a set of analytical tools for assessing current "as is" conditions and generating specific redesign ideas. The key to this final step of the procedure involves the development of data for a "process profile", which ideally detects and defines so thoroughly existing defects that appropriate changes are readily apparent.

The sweeping scope and complexity of the BPR model is evident immediately; its proponents frankly indicate that this redesign process involves many people, occurs over long periods of time, and requires visible and vocal support from the highest institutional leaders.

They suggest, however, that BPR will have significant positive results if implemented correctly, and therefore is worth the effort required for its use in most institutions. They also stress that this process is the next step in management theory and practice after Total Quality Management; the model designers suggest that their BPR is superior, since TQM usually accepts the status quo and attempts to improve it, while BPR challenges the status quo and is employed where more radical improvements are needed to solve systemic problems. BPR is, then, all about change, and is specifically designed to be even more intrusive, some would say threatening, than TQM.

Case Studies Involving Facilities Managers

Two of the six case studies included in Business Process Redesign involve processes which directly affect facilities managers. Both of these are discussed below, and are briefly reviewed to assess BPR's effectiveness in each study.

The first case study involves the procurement of goods in a large public research institution. Using BPR nomenclature, five "tools" were utilized in "...redesign efforts in four key administrative processes, focusing on improved efficiency, cost effectiveness and customer orientation." (P. 93). The output of each "tool" facilitated the formation of four analytical foci, including the creation of a process flow-chart with non-value-added assessment, a volume analysis of workloads, a work distribution chart, and a cost of quality analysis for the entire procurement of goods process at the institution. Not surprisingly, four major conclusions from this process profile were generated, concerning policies, systems, workload and quality:

- "The University-wide procurement approval policies were overly complex, with inappropriate limits that significantly impeded turnaround time and customer service in the procurement process." (P.93)
- "Accountability at this University was very weak; therefore, if funds were misspent, it was unclear who ultimately was accountable and what recourse would be taken." (P.95)
- "Procurement and Contracting staff were doing more with less and these increases were not sustainable on a long-term basis without fundamentally changing the operation and systems in the department." (P.98)
- "The procurement process had high costs of quality - due to the process complexity and lack of an automated system - that could be reduced greatly by BPR." (P.100)

Based on these findings, the Procurement and Contracting Department was able to enlist the aid of senior administrators to cross departmental boundaries in addressing and correcting policy issues which had to be changed to improve the purchasing system. This assistance by upper management personnel, along with the gradual acceptance by the staff of the need for change, produced a university-wide rather than departmental design and solution to the procurement problem.

The second case study centered on the management of facilities in a medium-sized independent liberal arts institution located in an urban setting. This school had recently concluded a period of rapid expansion of its facilities, complete with an increase in the staffing of the physical plant department. BPR was used in this instance to determine the

appropriate organizational structure and staffing level for the future maintenance mode, as opposed to the construction and renovation mode of operation used during the past decade.

To implement this management review, a different mixture of "tools" were utilized than were employed in the procurement case study. Five analytical foci were developed, including customer analysis, competitive benchmarking, volume analysis, work distribution chart and cost of quality analysis. In this study four conclusions were reached concerning management of daily work requests, quality, organization, staffing and planning:

- "The process to manage daily work did not fully leverage technology, a circumstance that impaired management information, diminished productivity and ultimately increased costs." (P.107)
- "Physical Plant had very high costs of quality and low customer ratings on quality, indicating a need to re-focus the department on service delivery and efficiency." (P.109)
- Physical Plant and the larger division of administrative services were overstaffed at the senior levels but not at the worker levels, except in groundskeeping, according to peer benchmarks and volume analysis." (P.114)
- "Most importantly, the lack of clearly articulated, well understood university-wide goals and plans forced physical plant to respond to ad-hoc directives from a wide variety of constituencies, reducing efficiency and increasing costs and frustration. This was a fundamental management issue that had to be addressed for BPR to be successful." (P.114)

Based on this information, the BPR team concluded that the issues of overstaffing, inappropriate organization structure and lack of coordinated institutional planning were so egregious that a successful BPR intervention was not possible. Even though specific suggestions, including reductions in staffing levels at the senior management level, were generated, the process was suspended to allow the institution to regroup to become ready for, and fully committed to, implementing BPR at its most senior levels.

Conclusions and Suggestions

BPR offers a thoroughly researched and well-crafted prescriptive punch list for evaluating how well a college or university runs its business-related departments. No other association in higher education is better qualified to promote this concept than NACUBO, nor is anyone else better positioned to superintend and implement changes suggested by, and resulting form, the redesign process. BPR correctly emphasizes the need for visible and positive support from the highest organization leaders, and recognizes the difficulty of affecting change in the academy[12]. This process, however, attempts to systematize the chaos that seems to be an integral part of most colleges and universities, and seems to overemphasize pure management, or doing things right, at the expense of leadership, or doing the right thing. The process suggests that "the best and brightest" be selected for teams which reach a consensus regarding what should be changed. Such consensus-building procedures may be effective with intuitive processes, but these will probably not produce the same direction that effective leadership brings to non-intuitive decisions, especially those requiring an overview of the entire academic process. Any attempt at BPR without a knowledgeable physical plant representative among the "best and brightest" could result in

sound technical decisions being overridden by consensus, a situation clearly in no one's best interest. Another aspect of the process, a reliance on data collected regarding specific tasks or procedures, affects facilities managers immediately. APPA has been successful in compiling an enormous amount of benchmarking data for facilities-related processes, especially that presented in the biennial Comparative Costs and Staffing Report. It would seem logical that any BPR program would immediately concentrate on areas where data already exists, causing facilities managers to walk the BPR plank first.

Based on this cursory review of the strategic business improvement model dubbed Business Process Redesign, facilities managers must carefully plan for BPR's potential arrival at the door of their Old Main. BPR is a thorough but time consuming and vigorously intrusive method for rightsizing the academy's business procedures. Not unlike zero based budgeting, this process cuts to the quick and forces an evaluation of, and justification for, each step in an institution's business operation. If properly implemented, but only after vocal and continual validation by the highest administrators, BPR is capable of identifying existing problems, and should be especially helpful in promoting interdepartmental and cross-campus change. Each facilities manager in higher education owes it to his or her institution to completely understand the process, to make sure that unnecessary and ill-advised changes to the physical plant department's operation are not proposed by otherwise well-meaning committee members.

Endnotes

1. Dougherty, Jennifer D. et al. Business Process Redesign for Higher Education. Washington, DC: NACUBO, 1994.

2. Kaiser, Harvey M. "Rightsizing Through Restructuring: A Higher Education Challenge". Facilities Manager, Fall 1994, Volume 10 No. 4, pp. 24-33.

3. APPA: The Association of Higher Education Facilities Officers. Rightsizing Effectively. Arlington, VA: APPA, 1995.

4. Sherr, Lawrence and Deborah Teeter, (eds.). Total Quality Management in Higher Education. San Francisco: Jossey-Bass, 1991 (New Directions for Institutional Research. No. 71).

5. Petillo, J. T. "Learning from Success and Failure in Quality Management". Facilities Manager, Fall 1993, Volume 9 No. 4, pp. 22-25.

6. Rowe, Roger E. "TQM Training and Implementation Plan". Facilities Manager, Summer 1993, Volume 9 No. 3, pp. 34 to 40.

7. Reynolds, Gary L. (ed.). Building Quality: TQM for Campus Facilities Managers. Washington, DC: APPA, 1994.

8. From Douglas Kirkton's "On-Line Quality Resource Guide" posted to the FACSER-L Internet Network on September 9, 1995.

9. Schriener, Judy et al. "Total Quality Management Struggles into a Low Orbit". Engineering News-Record, May 15, 1995, pp. 24-28.

10. Smith, Bertram D. "Benchmarking: Old Technique, New Frontier". Facilities Manager, Spring 1995, Volume 11 No. 2, pp. 18-26.

11. National Association of College and University Business Officers. Operational Benchmarking for Quality Improvement and Cost Management in Higher Education. Washington, DC: NACUBO, 1991.

12. Regarding the need for support from highest management levels and the difficulty in attempting to implement change in higher education, see Hughes, K. S. and D. Conner (eds.) Managing Change in Higher Education. Washington, DC: College and University Personnel Association, 1989.